

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000908**Date Inspected:** 17-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Ye Yong Jun, Arbin Huang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** CalTrans mock up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Dan Hernandez was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-ups 89.00 meter and 114.00 meter for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item Description	WBS	Dwg No.	Status
1 89M Strut Plate Splice			In Progress
Caltrans QA Inspector observed Submerged Arc Welding (SAW) in progress of fill passes on strut plate splice weld on plate's p1114-1 to mp517-1. The weld joint is a Complete Joint Penetration (CJP) double bevel butt-joint in the 1G position. The approved welder Gu Caihong #053748 was using approved welding procedure specification WPS-B-T-4221-B-U3-5. Caltrans QA Inspector measured current welding parameters at approximately 579 amps, 31 volts and 450 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SAW welding consumable is identified as LA-85 ENT5 and MIL800-HPNI flux. ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Ye Yong Jun and Bureau Veritas Inspector Mr. Arbin Huang were observed monitoring welding activities at the work station.			
2 114M Longitudinal Stiffener plate to Interior Splice Assembly			In Progress
Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress of stiffener plate p920-6 to Interior Splice plate A65 and p920-4 to A67. The weld joints are Complete Joint Penetration (CJP), double bevel T-joints. The welders are observed welding filler passes in the 1G position using a chipping hammer and wire brushing during interpass weld cleaning. The approved welder is identified as Mr. Chang Chuan Cang # 053870 and Mr. Li Shuoqiang #053609. The			

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welders were using welding procedure specification WPS-B-T-2231-TC-U5-F. Caltrans QA observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Lu Jian Ping and Bureau Veritas Inspector, Mr. Arbin Huang monitoring welding activities at the workstation. Caltrans QA measured current welding parameters at approximately 314 amps, 31 volts and 248 millimeters per minute (mm/min) travel speed for Mr. Chang Chuan Cang and 290amps, 31.6 volts and 326 millimeters per minute (mm/min) travel speed for Mr. Li Shuoqiang. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches).

3 89M Longitudinal stiffener plate to skin plate A

In Progrss

Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress of stiffener plate mp504-2 to skin plate A. The weld joints are Complete Joint Penetration (CJP), double bevel T-joints. The welders are observed welding filler passes in the 1G position using a chipping hammer and wire brushing during interpass weld cleaning. The approved welder is identified as Mr. Li Shuoqiang # 053609. The welder was using welding procedure specification WPS-B-T-2231-TC-P5-F. Caltrans QA observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Lefeng and Bureau Veritas Inspector, Mr. Arbin Huang monitoring welding activities at the workstation. Caltrans QA measured current welding parameters at approximately 307 amps, 31.9 volts and 248 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches).

Summary of Conversations:

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Hernandez,Dan

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer
